

# The Long-Term Financial and Health Outcomes of Disability Insurance Applicants

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# Well-Being of Disabled at Older Ages

- Disabled defined by application to a disability program
  - SSDI
  - SSI
- Self-defining

# Well-Being of Disabled at Older Ages

- Social Security Eligibility
  - You are not working, or very little
  - Your disability is severe, cannot do basic work activities such as walking, standing, or remembering
  - Your disability has lasted or is expected to last at least a year or result in death
  - You cannot do the work you did before
  - Your disability prevents you from doing other work
- SSDI does not give benefits if you are partially disabled, or if your disability is short-term.

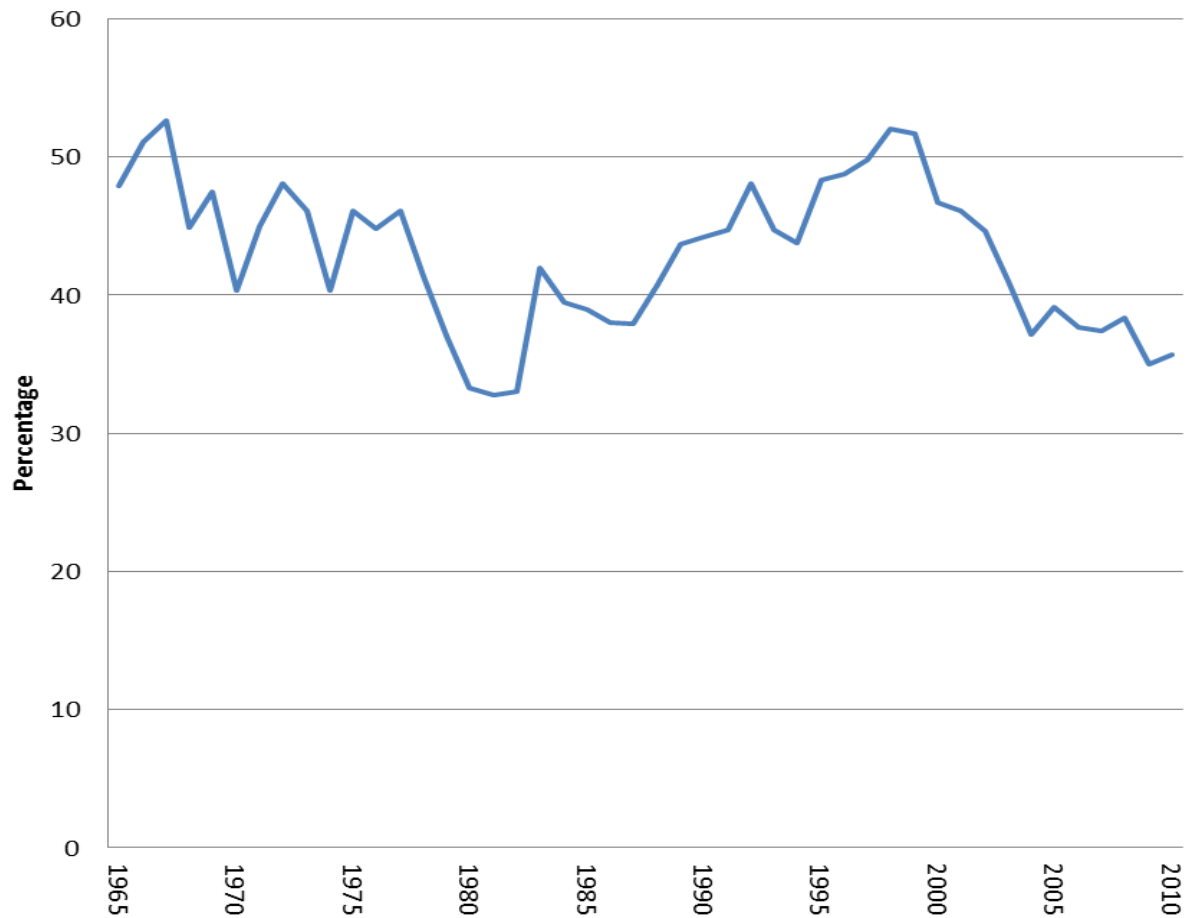
# Well-Being of Disabled at Older Ages

- Disability begins before 65
- Lifetime of lower income lead to less savings / spend down of assets
  - Benefits replace ~42% earnings
- Lower Social Security benefits than if full worklife
- Lost or reduced pension
- Loss of retiree health insurance
- Worse health
  - Greater health service use and OOP spending
  - Greater ADLs and other uncovered care needs

# Well-Being of Denied Applicants

- May be incorrectly denied benefits
- May have partial disability or temporary disability and be ineligible for benefits
- May be able to work and application was correctly denied

## Social Security Awards as a Percentage of Applications 1965-2010



# Well-Being of Denied Applicants

- Lifetime of lower income lead to less savings
  - Out of labor force / restricted opportunities
  - Decline in wages from time out of labor force
  - ❖ No SSDI to replace portion of earnings
- Lower Social Security benefits with shorter worklife
- Lost or reduced pension
- Loss of retiree health insurance
- Worse health
  - Greater health service use and OOP expenses
  - Greater ADLs and other uncovered care needs
  - No Medicare and no employer provided insurance

# Outcomes

- Examine financial position and health
- Compare outcomes for three groups:
  - Successful applicants
  - Unsuccessful applicants (after all appeals)
  - Never applied
- Ages:
  - Examine @ 65 to assess retirement income
    - Know application / appeals process complete
    - Labor force participation likely complete
  - Examine @ time of application



# Outcomes

- Income
  - Total income
  - Components of income
  - Own income and family income
- Assets
  - With and without housing wealth
- Health status
  - Self-reported health status
  - Service use (doctor visits, hospital stays)
  - Depression
  - Mortality

# Health and Retirement Study

- Nationally representative panel survey of the older population
  - Respondents interviewed biennially
  - First two cohorts interviewed in 1992 / 1993
  - Additional cohorts added in 1998, 2004, 2010
- Detailed information on income, assets, health, medical spending / service use.
- ❖ Importantly information on SSDI / SSI applications, awards, benefits
  - Can get administrative data to merge but haven't yet

## Means of Variables by Disability Status at Age 66

	Never Applied (8,824)
<i>Demographic Characteristics:</i>	
Nonwhite	0.16
Hispanic	0.08
Coupled	0.76
Schooling	12.49
Age	66.7

## Means of Variables by Disability Status at Age 66

	Never Applied (8,824)	Denied Benefits (556)	Received Benefits (1,181)
<i>Demographic Characteristics:</i>			
Nonwhite	0.16	0.31	0.31
Hispanic	0.08	0.13	0.13
Coupled	0.76	0.58	0.59
Schooling	12.49	10.57	10.54
Age	66.7	66.5	66.6

## Means of Variables by Disability Status at Age 66

	Never Applied	Denied Benefits	Received Benefits
<i>Health information:</i>			
# Doctor visits	8.6	17.6	17.1
# Hospital nights	1.7	5.5	5.8
Depressed	0.15	0.39	0.44
OOPME*	3,201	5,249	4,344

\* Note: Should all be covered by Medicare. Spending includes Medicare Part B premiums and premiums for any supplemental medigap insurance.

## Means of Variables by Disability Status at Age 66

	Never Applied	Denied Benefits	Received Benefits
<i>Health information:</i>			
Ex / vg	0.46	0.14	0.10
Good	0.33	0.26	0.23
<b>Fair</b>	<b>0.16</b>	<b>0.35</b>	<b>0.37</b>
<b>Poor</b>	<b>0.04</b>	<b>0.25</b>	<b>0.29</b>
Died	0.13	0.22	0.24
Age at Death	73	71	71

## Means of Variables by Disability Status at Age 66

	Never Applied	Denied Benefits	Received Benefits
<i>Financial information:</i>			
Total Income*	70,378	30,478	32,662
Total Assets	602,432	175,532	210,040
Non-housing Assets	407,736	87,054	128,621

\*Note age 65 so getting SS income

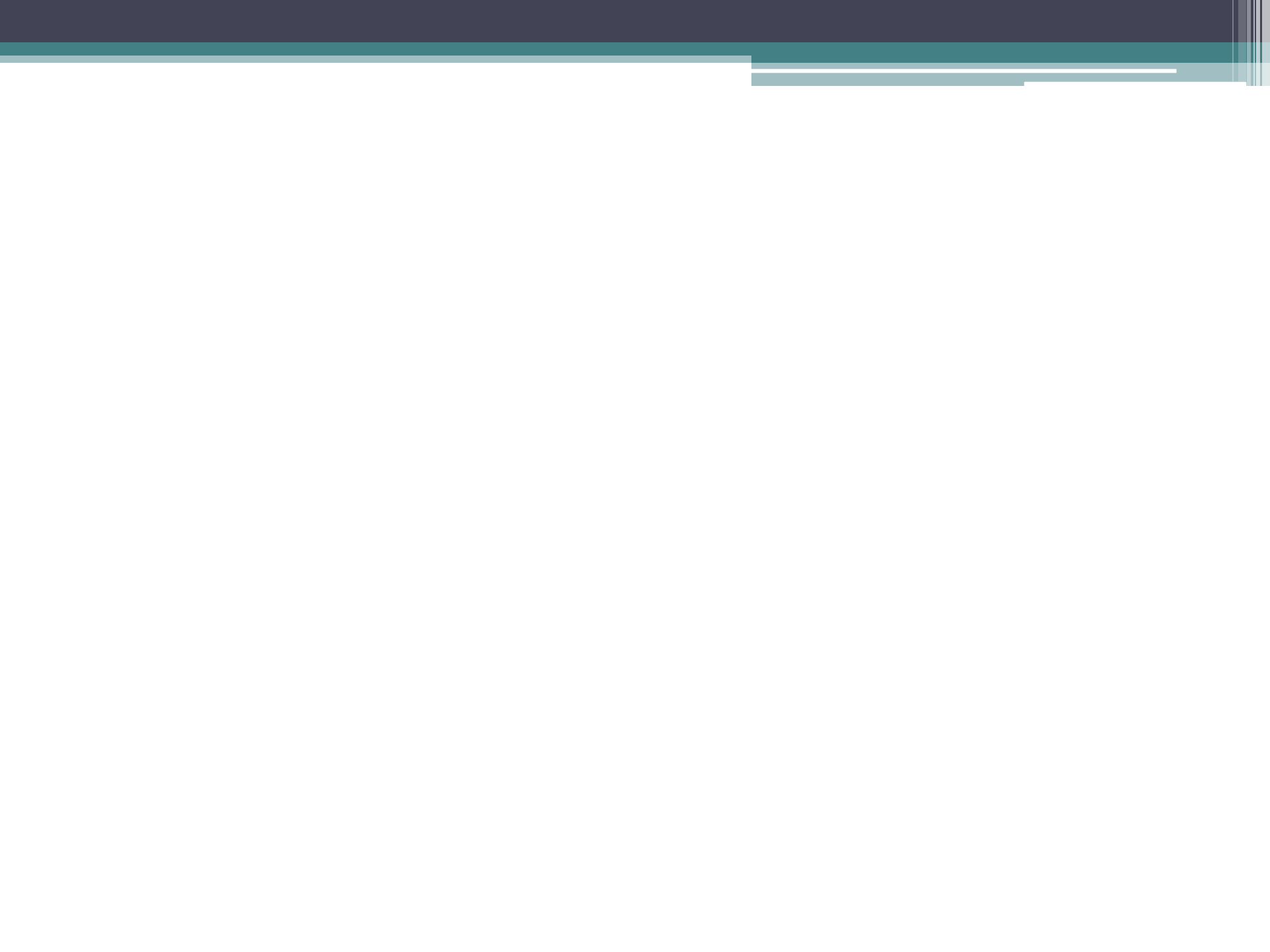
## Means of Variables by Disability Status at 66

	Never Applied	Denied Benefits	Received Benefits
<i>Income components:</i>			
Own earnings	10,971	2,000	941
SSDI/SSI	65	484	3,110
SS retirement	10,276	8,806	8,019
Pension	7,140	3,243	2,810
WC/UI/Other govt	828	986	863



## Means of Variables by Disability Status at 66

	Never Applied	Denied Benefits	Received Benefits
<i>Income components:</i>			
Spouse earnings	11,314	6,935	8,231
Spouse SSDI/SSI	298	484	889
Spouse SS ret	7,926	6,771	6,164
Spouse Pension	6,202	3,529	2,871
Spouse govt inc	835	565	436
HH asset inc	16,741	2,726	3,807
HH other	5,821	1,888	2,256



# Prior Status

- Examine at
  - First survey after observed application
  - If applied prior to HRS interview use first obs
  - If never applied use first observation
- At age:
  - For those who never applied : 56.0
  - For those whose application was denied: 57.6
  - For those who received benefits: 58.2

## Means of Variables by Disability Status at First Obs

	Never Applied
<i>Health:</i>	
Ex / vg	0.60
Good	0.29
Fair	0.12
Poor	0.09
Depressed	0.17
# Doc visits	3.4
# hospital nights	0.4
OOPME	1,773

## Means of Variables by Disability Status at First Obs

	Never Applied	Denied Benefits	Received Benefits
<i>Health:</i>			
Ex / vg	0.60	0.11	0.08
Good	0.29	0.24	0.19
Fair	0.12	0.34	0.37
Poor	0.09	0.31	0.37
Depressed	0.17	0.49	0.48
# Doc visits	3.4	12.7	15.4
# hospital nights	0.4	4.3	5.7
OOPME	1,773	3,333	5,225

Recipients should have Medicare benefits

## Means of Variables by Disability Status at First Observation

	Never Applied	Denied Benefits	Received Benefits
<i>Financial:</i>			
Total Income	85,458	36,106	35,693
Total Assets	416,094	149,628	159,049
Non-housing Assets	282,658	83,755	91,777

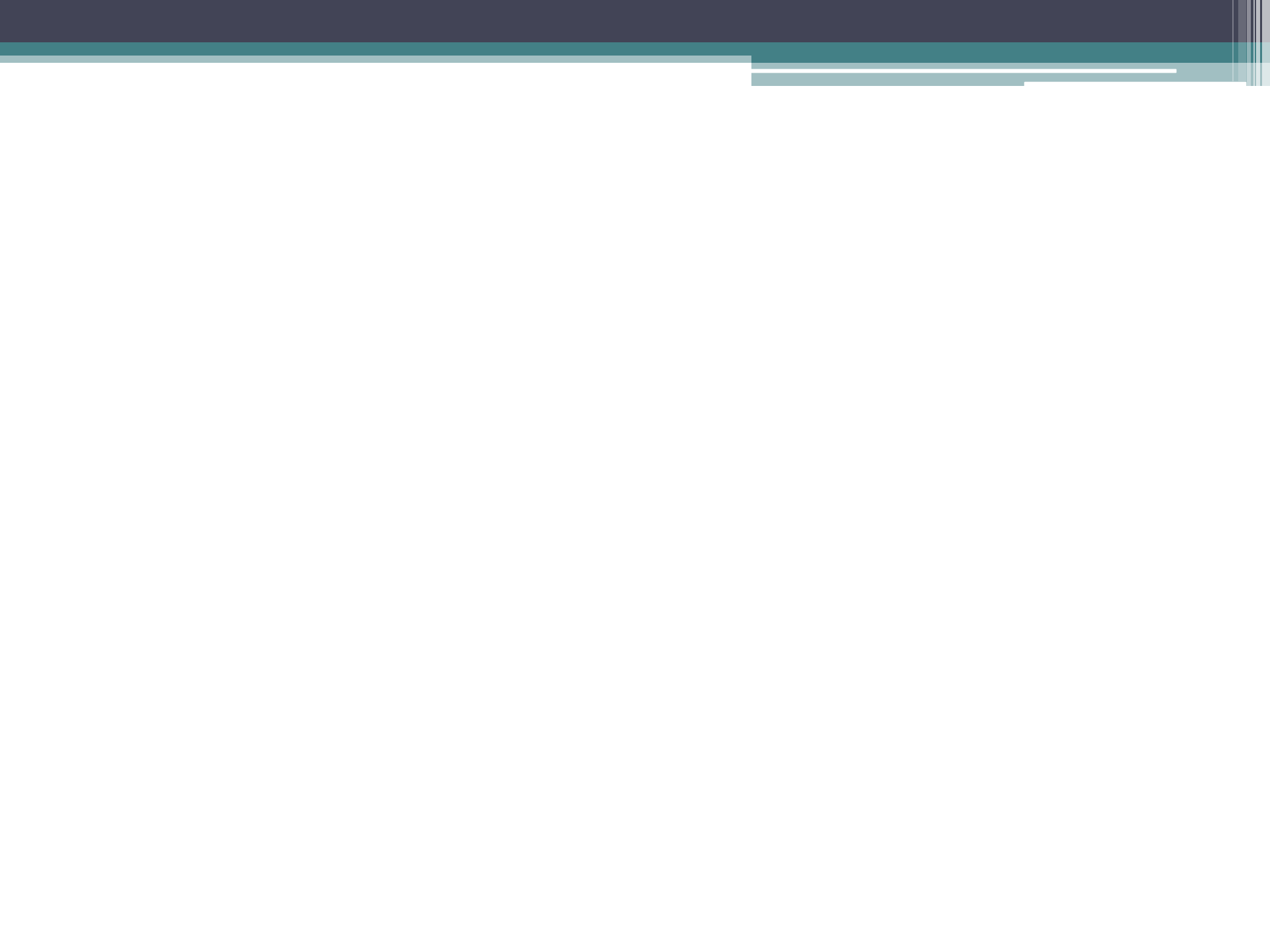
## Means of Variables by Disability Status at First Observation

	Never Applied	Denied Benefits	Received Benefits
<i>Income components:</i>			
Own earnings	36,196	7,999	4,062
SSDI/SSI	35	571	5,766
SS retirement	349	1,044	565
Pension	1,917	1,677	1,763
WC/UI/Other govt	887	1,807	1,769

## Means of Variables by Disability Status at First Observation

	Never Applied	Denied Benefits	Received Benefits
<i>Income components:</i>			
Spouse earnings	31,466	18,410	15,122
Spouse SSDI/SSI	383	812	1,017
Spouse SS ret	953	1,702	1,822
Spouse Pension	2,345	2,208	1,346
Spouse govt inc	860	1,103	987
HH asset inc	12,338	4,558	3,936
HH other	3,768	2,229	4,509





# Regression Analyses

- How much of the difference by disability status remains after controlling for differences in other observable characteristics?
- Model Income / assets as a function of disability status
- Same results as in simple cross tabulations:
  - Application indicator is significant and negative
  - Benefit indicator is insignificant and small

# Regression Analysis

- Outcome variables (in turn)
  - Total income
  - Total Assets
  - Out of pocket medical spending
- Regressors of interest:
  - Denied benefits, Received benefits
  - Relative to never applied and to each other
- Control variables:
  - Age, health status, depression, race / ethnicity, schooling, marital status, sex

## Regression Analysis

	Denied Benefits	Received Benefits
<i>Income measures:</i>		
Income age 65	-14,791***	-11,799***
Income first obs	-16,191***	-13,952***
<i>Asset measures:</i>		
Assets age 65	-129,008*	-80,537
Assets first obs	-89,333**	-71,200**
<i>Medical Spending:</i>		
OOP Age 65	1,412**	378
OOP first obs	1,189	2,987***

## Regression Analysis

	Denied Benefits	Received	Ex Health
<i>Income measures:</i>			
Income age 65	-14,791***	-11,799***	28,165***
Income first obs	-16,191***	-13,952***	29,571***
<i>Asset measures:</i>			
Assets age 65	-129,008*	-80,537	330,898***
Assets first obs	-89,333**	-71,200**	167,536***
<i>Medical Spending:</i>			
OOP Age 65	1,412**	378	-3,564***
OOP first obs	1,189	2,987***	-1,031

## Regression Analysis

	Denied Benefits	Received	College
<i>Income measures:</i>			
Income age 65	-14,791***	-11,799***	51,551***
Income first obs	-16,191***	-13,952***	53,685***
<i>Asset measures:</i>			
Assets age 65	-129,008*	-80,537	676,808***
Assets first obs	-89,333**	-71,200**	329,104***
<i>Medical Spending:</i>			
OOP Age 65	1,412**	378	881**
OOP first obs	1,189	2,987***	1,446***

# What Happens as People Age?

Figure 2A: Median Household Income by  
SSDI/SSI Status & Age

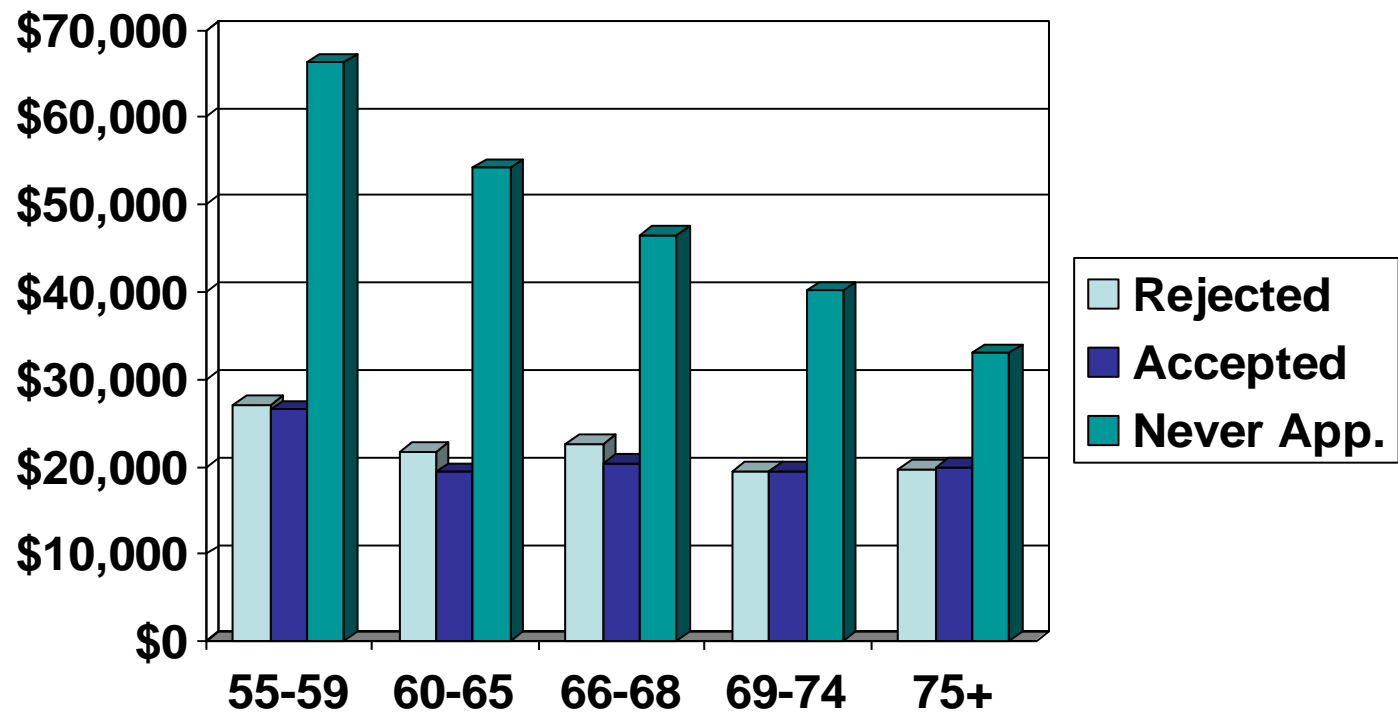




Figure 2B: Mean Household Income by  
SSDI/SSI Status & Age

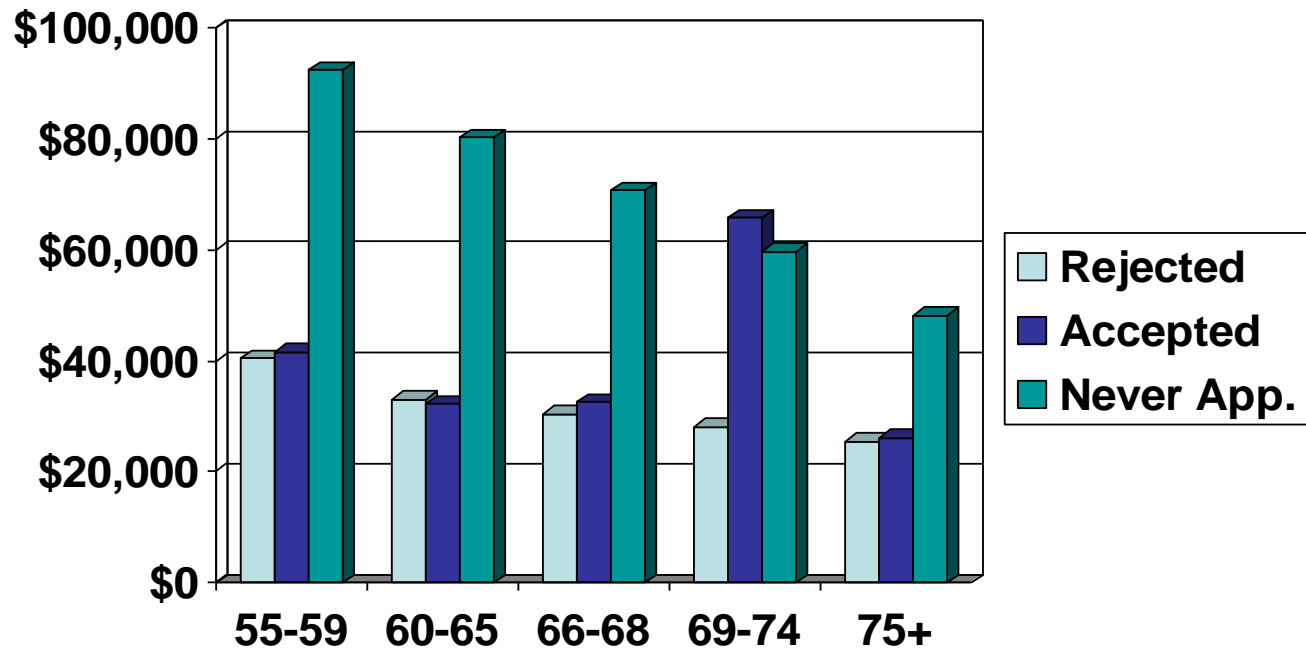


Figure 3A: Median Household Assets by  
SSDI/SSI Status & Age

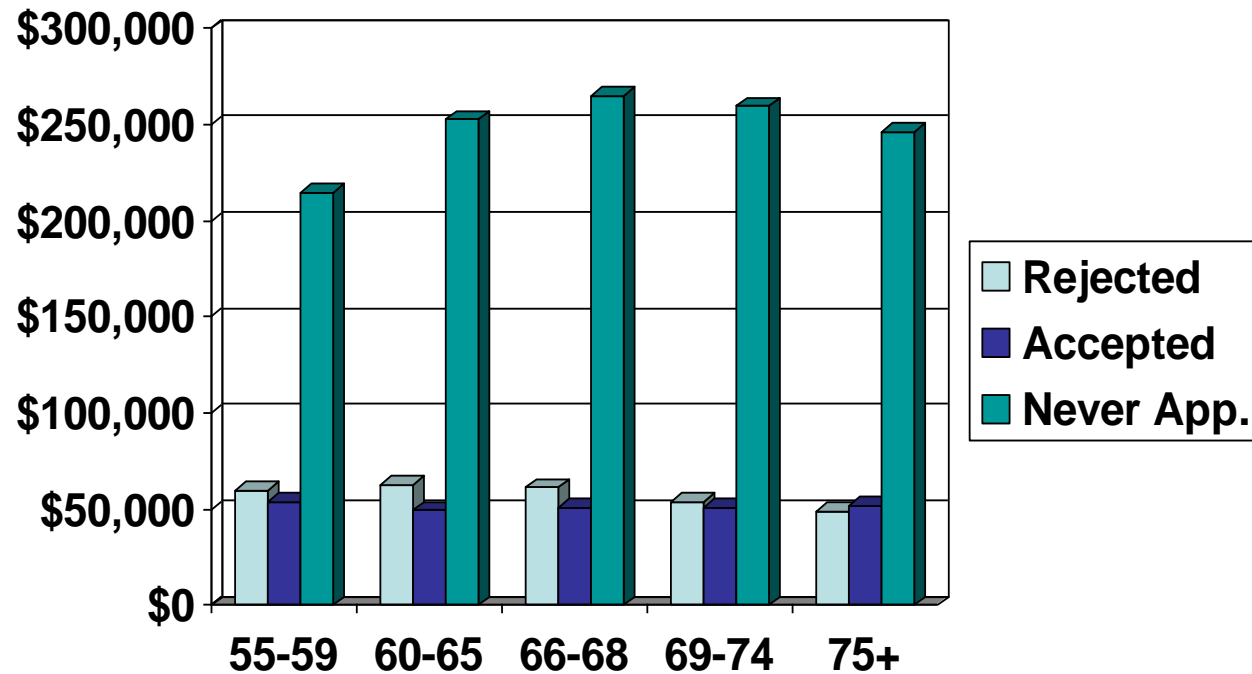


Figure 3B: Mean Household Assets by  
SSDI/SSI Status & Age

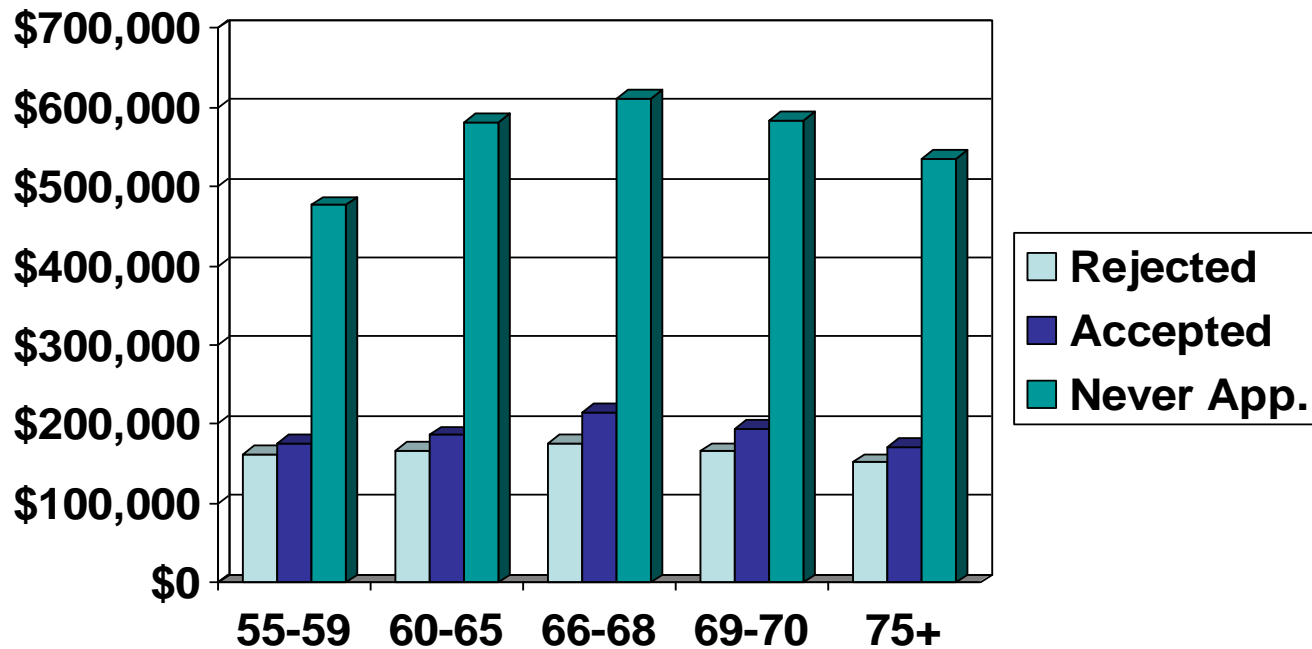
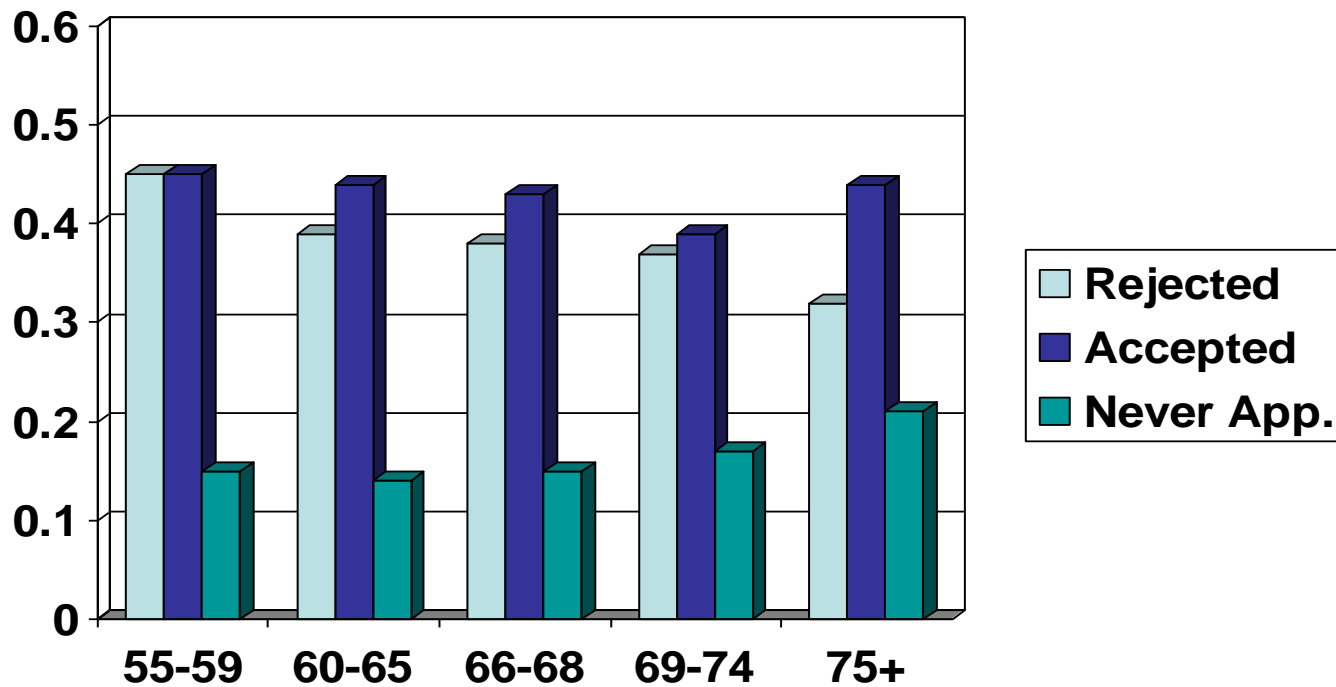
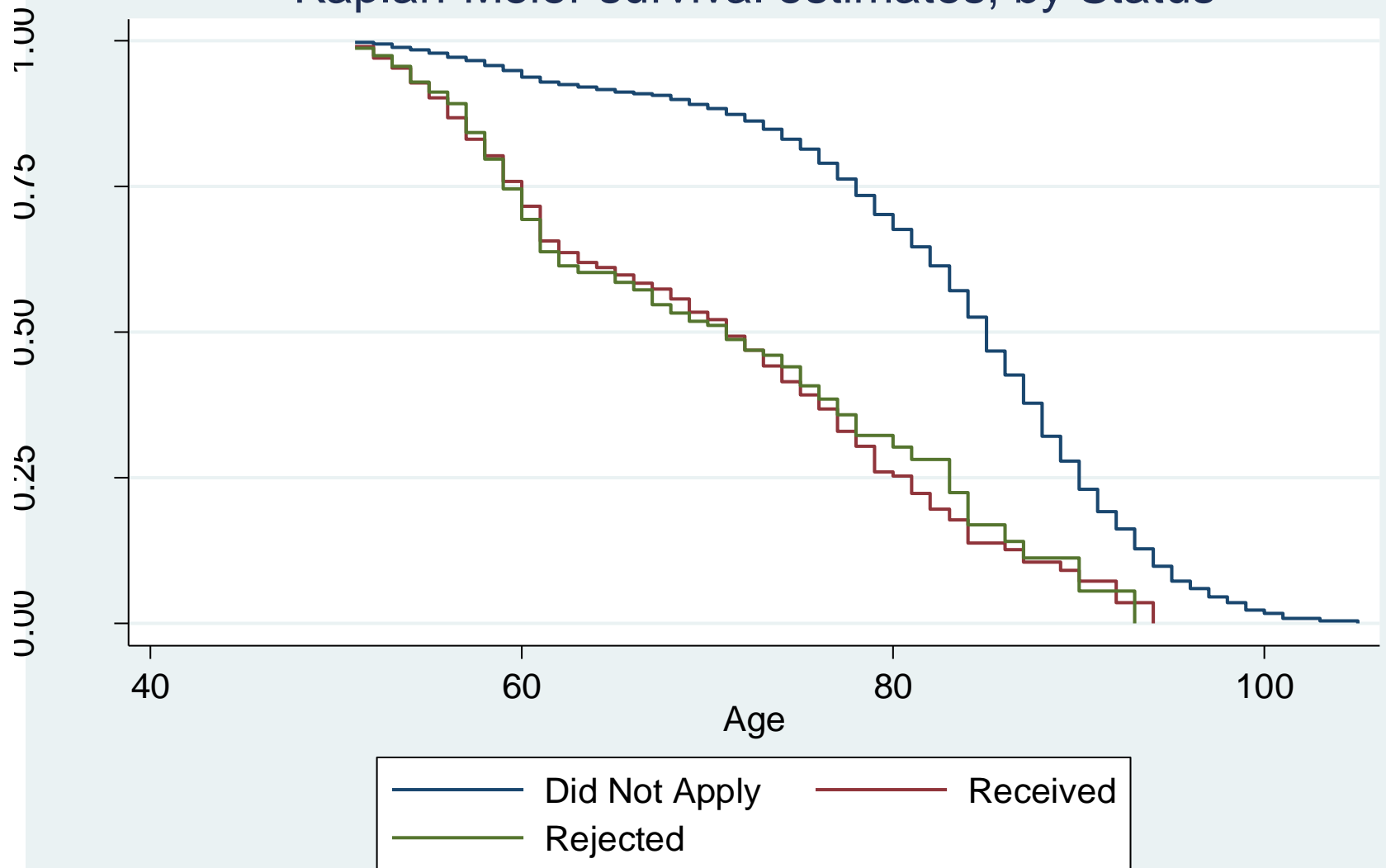


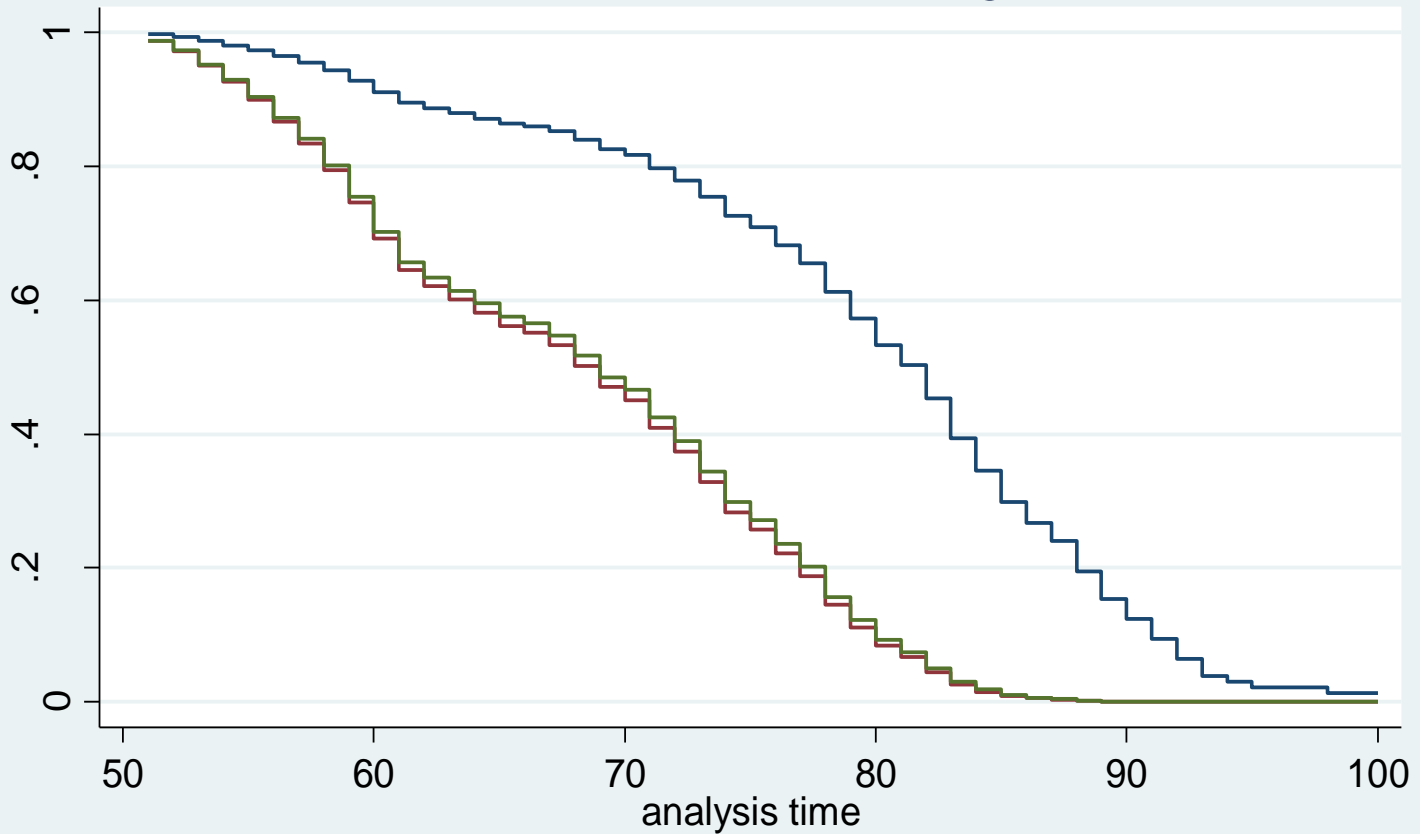
Figure 4: Percentage Currently Depressed by  
SSDI/SSI Status & Age



## Kaplan-Meier survival estimates, by Status



## Cox proportional hazards regression



— receive=0 reject=0 — reject=1  
— receive=1

# Summary

- Disability applicants (rejected & accepted) are significantly worse off than non-disabled in numerous dimensions
  - Income, wealth, and health
  - Not significantly different from each other
- But not significantly different from each other

# What might we infer about eligibility process?

- Doesn't work:
  - Those denied benefits appear to be in just as poor health as recipients
- Does work:
  - Those denied benefits manage to do as well as those receive assistance
  - Work, family / spouse helps smooth consumption
- Does work:
  - May be able to screen correctly but rejected applicants are scarred by time out of the labor force
    - Deterioration of human capital
    - Sends poor signal to employers



